

LXR Agonist Compound A Activates the Expression of SSG

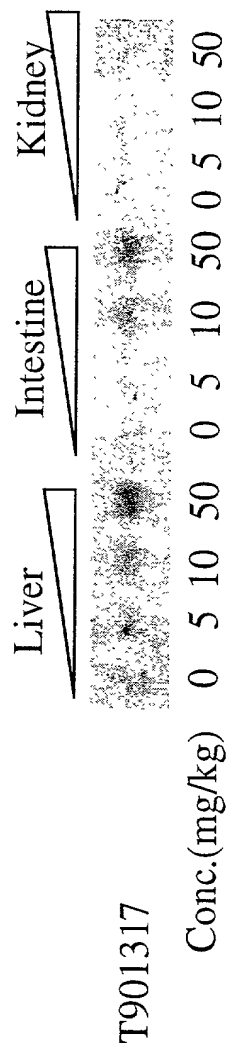
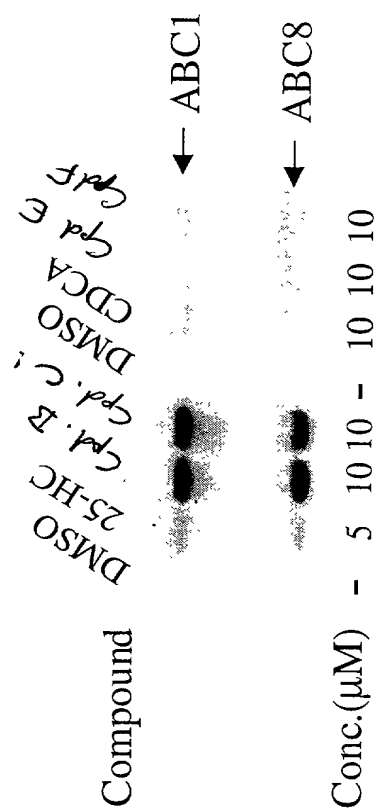


FIGURE 1

Oxysterol and LXR Agonists Activate the Expression of Cholesterol Transporters, ABC1 and ABC8



LXR agonist: Cpd B, C
FXR agonist: Cpd E, F

FIGURE 2

Induction of ABC1 in Liver, Intestine and Kidney of C57BL/6 Mice by LXRa Agonist *Cpd A*

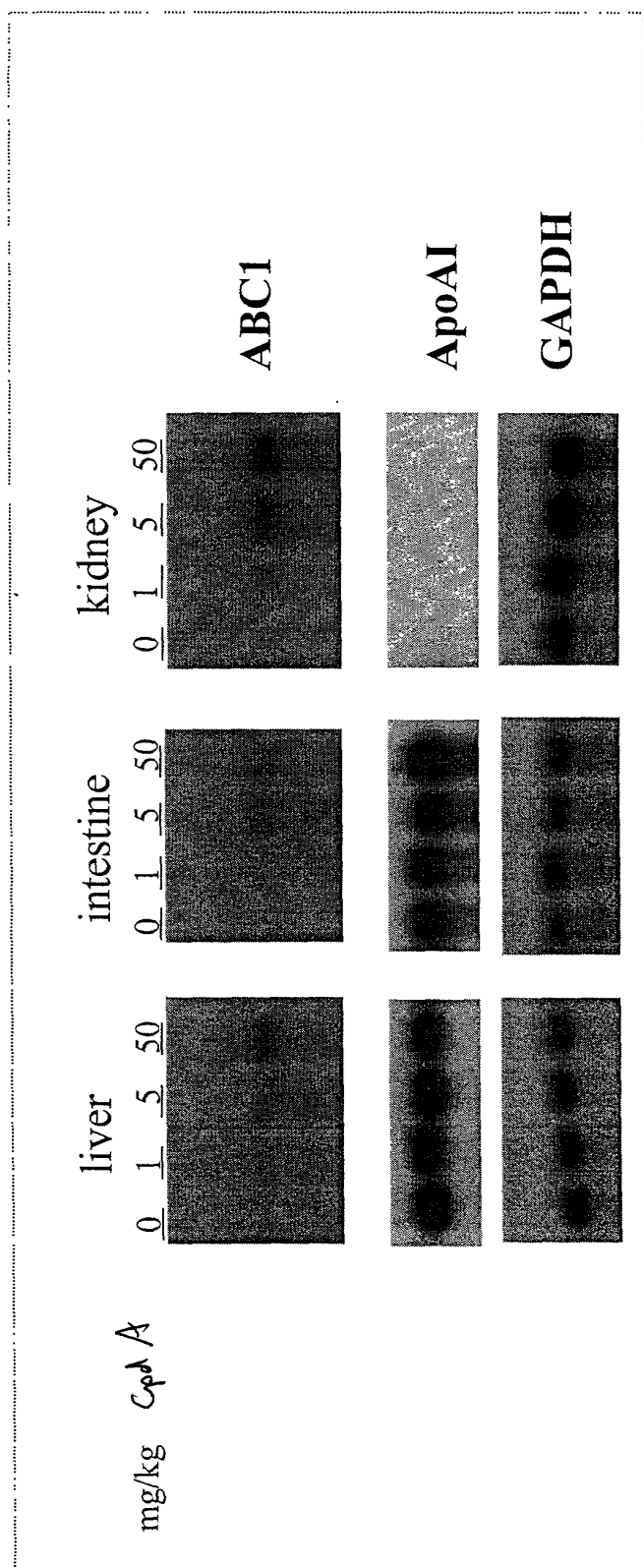


FIGURE 3

Cpd A Stimulates Cholesterol Efflux From Caco-2 Cells

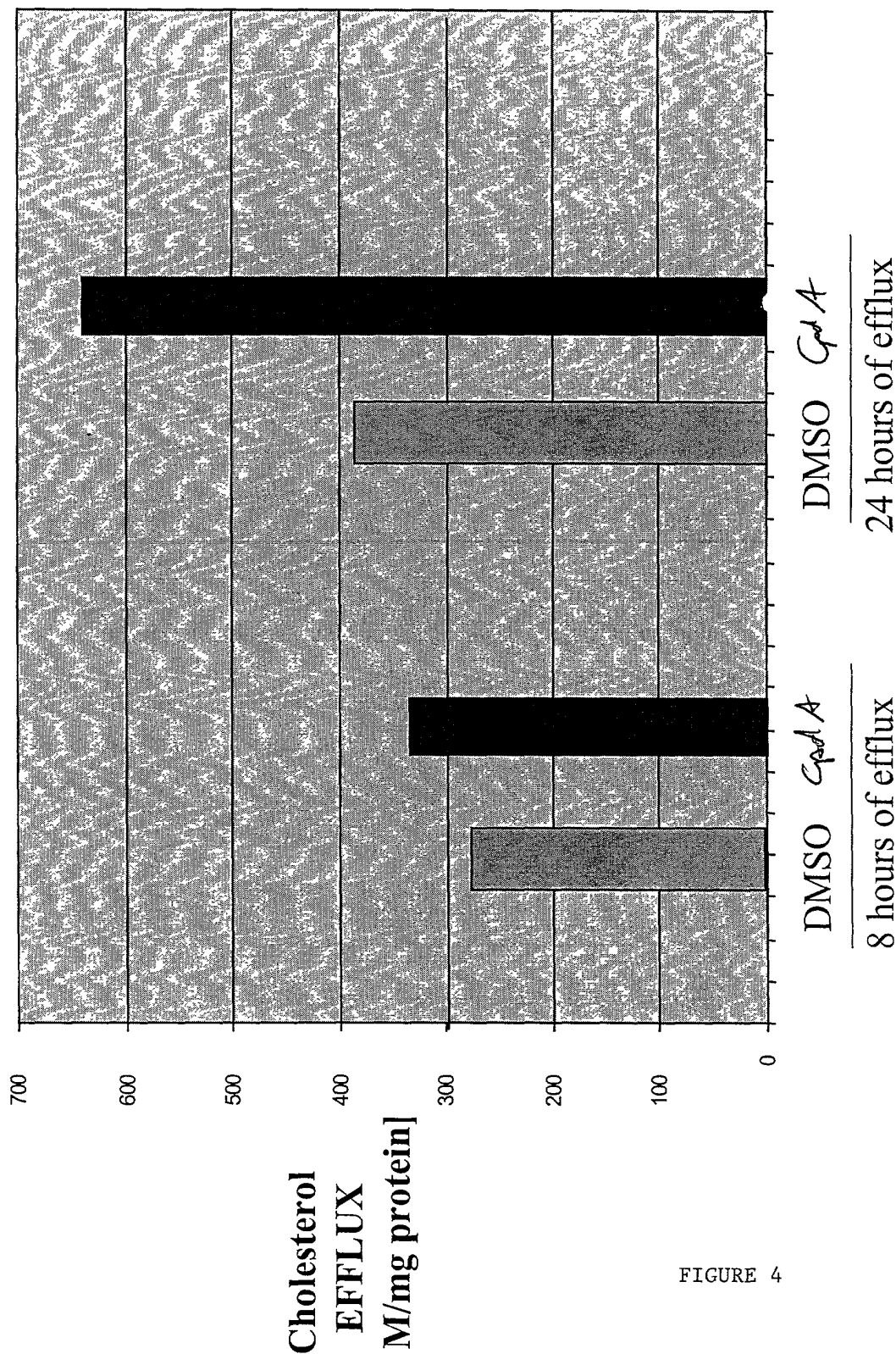


FIGURE 4

How Does LXR Regulate Cholesterol Absorption ? *-A Working Model -*

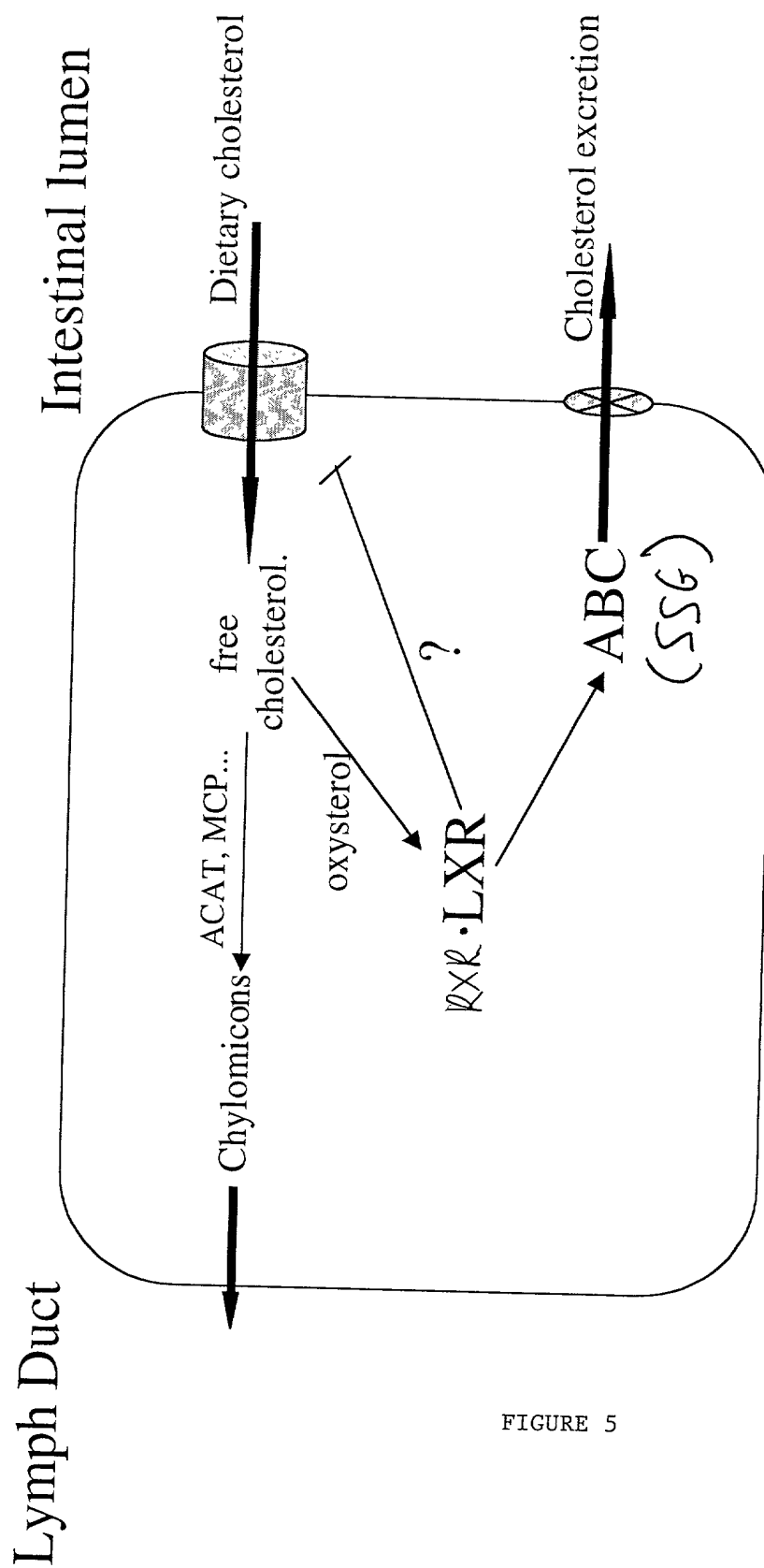
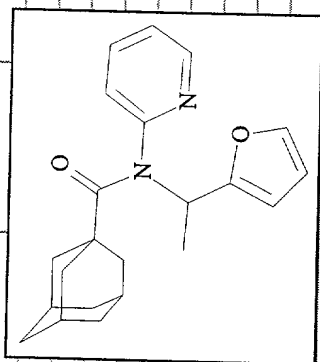
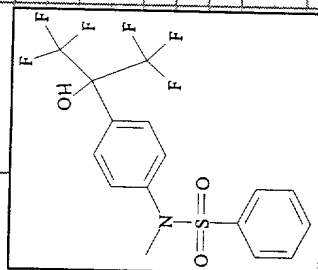


FIGURE 5

Compound C



Compound B



Compound A

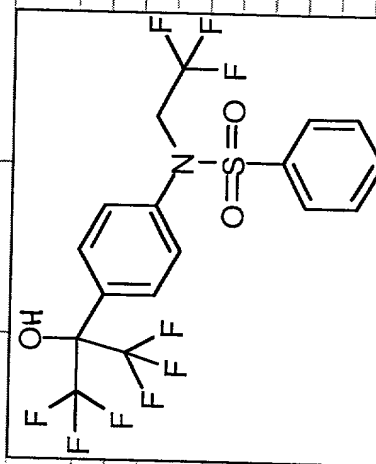


FIGURE 6

[illegible]

AGGACATT

FIGURE 7

FIGURE 8

Alignment of Human and Mouse SSG Protein Sequences

hSSG.pro	MGDLSSLTPG	GSMGLQVNRG	SQSSLEGAPA	TAPEP-HSLG	ILHASYSVSH	49
mSSG.pro	MGELPFLSPE	GARGPHINRG	SLSSLEQGSV	TGTEARHSLG	VLHVSYSVSN	50
hSSG.pro	RVRPWWDITS	CRQQWTRQIL	KDVSLYVESG	QIMCILGSSG	SGKTTLLDAM	99
mSSG.pro	RVGPPWNIKS	CQQKWDRQIL	KDVSLYIESG	QIMCILGSSG	SGKTTLLDAI	100
hSSG.pro	SGRLGRAGTF	LGEVYVNGRA	LRREQFQDCF	SYVLQSDTLL	SSLTVRETLLH	149
mSSG.pro	SGRLRRTGTL	EGEVFVNGCE	LRRDQFQDCF	SYVLQSDVFL	SSLTVRETLLR	150
hSSG.pro	YTALLAIRRG	NPGSFQKKVE	AVMAELSLSH	VADRLIGNYS	LGGISTGERR	199
mSSG.pro	YTAMLALCRS	SADFYNNKVE	AVMTELSLSH	VADQMIGSYN	FGGISSGERR	200
hSSG.pro	RVSIAAQLLQ	DPKVMFLDEP	TTGLDCMTAN	QIVVLLVELA	RRNRIVVLTII	249
mSSG.pro	RVSIAAQLLQ	DPKVMMLDEP	TTGLDCMTAN	QIVLLLAELA	RRDRIVIVTII	250
hSSG.pro	HQPRSELFQL	FDKIALISFG	ELIFCGTPAE	MLDFFNDCGY	PCPEHSNPFDD	299
mSSG.pro	HQPRSELFQH	FDKIALITYG	ELVFCGTPEE	MLGFFNNGCY	PCPEHSNPFDD	300
hSSG.pro	FYMDLTSVDT	QSKEREIETS	KRVOMIESAY	KKSAICHKTL	KNIERMKHLK	349
mSSG.pro	FYMDLTSVDT	QSREREIETY	KRVOMLECAF	KESDIYHKIL	ENIERARYLK	350
hSSG.pro	TLPMPVFKTK	DSEGVFSKLG	VLLRRVTRNL	VRNKLAVITR	LLQNLIMGLF	399
mSSG.pro	TLPMPVFKTK	DPEGMFGKLG	VLLRRVTRNL	MRNKQAVIMR	LVQNLIMGLF	400
hSSG.pro	LLEFVLVRVS	NVLKGAIQDR	VGLLYQFVGA	TPYTGMLNAV	NLFFVLRVAVS	449
mSSG.pro	LIFYLLRVQN	NTLKGAVQDR	VGLLYQLVGA	TPYTGMLNAV	NLFFMLRAVS	450
hSSG.pro	DQESQDGLYQ	KWQMLLAYAL	HVLFPFSVAT	MIFSSVCYWT	LGLHPEVARF	499
mSSG.pro	DQESQDGLYH	KWQMLLAYVL	HVLFPFSVIAT	VIFSSVCYWT	LGLYPEVARF	500
hSSG.pro	GYFSAALLAP	HLIGEFLLTV	LLGIVQNPNI	VNSVALLSI	AGVLVGSGLF	549
mSSG.pro	GYFSAALLAP	HLIGEFLLTV	LLGIVQNPNI	VNSIVALLSI	SGLLEIGSGFI	550
hSSG.pro	RNIQEMPIPF	KIISYFTFQK	YCSEILVVNE	FYGLNFTCGS	SNVSVTTNPM	599
mSSG.pro	RNIQEMPIPL	KILGYFTFQK	YCCEILVVNE	FYGLNFTCGG	SNTSMLNHPM	600
hSSG.pro	CAFTQGIQFI	EKTCPGATSR	FTMFLILYS	FIPALVILGI	VVFKIRDHLI	649
mSSG.pro	CAITQGVQFI	EKTCPGATSR	FTANFLILYG	FIPALVILGI	VIFKVRDYLI	650
hSSG.pro	SR					651
mSSG.pro	SR					652

FIGURE 9

Reference Number: 6711
Stanford RH Panel: TNG4
Lowest LOD Reported: 6
Chromosome Value: 0

Results for HT

Submitted

Vector:00010000000001000100001010010000000100000010001000000000010000000000
001000000000001000100

SHGCNAME CHROM# LOD_SCORE DIST.(cRs)

1 SHGC-36672 2 7.52 35

Vector:00000000R00001010100100010011100000100000010001000000000101000000000
001000000000R01000100

2 SHGC-8189 2 6.53 44

Vector:00000000100001010100100010011100000100000010001000000000101000000000
001000000000101000100

3 SHGC-699 2 6.03 48

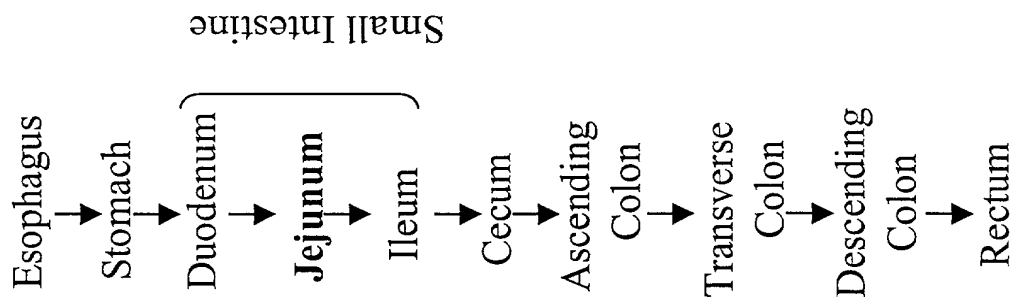
Vector:00010000000001000100001010010100100001000110001000100000101000000000
000000100000011000100

The number of markers searched was 32440.

FIGURE 10

0937993 "0430
T08740" 26626860

Expression Profile of *gla* in the GI Tract



Stomach
Rectum
Liver
Jejunum
Ileum
Ileocecum
Esophagus
Duodenum
T. Colon
D. Colon
A. Colon
Cecum

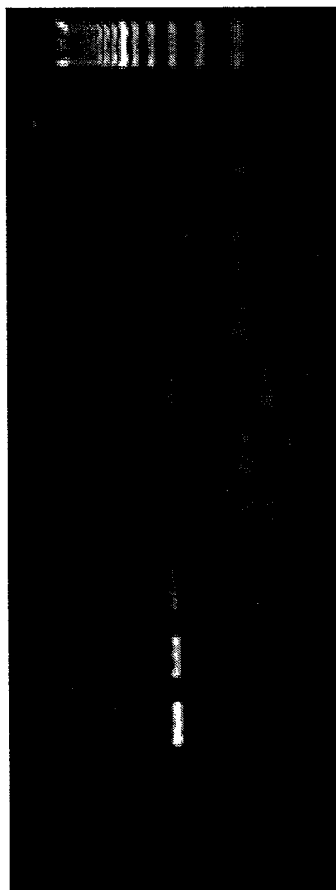
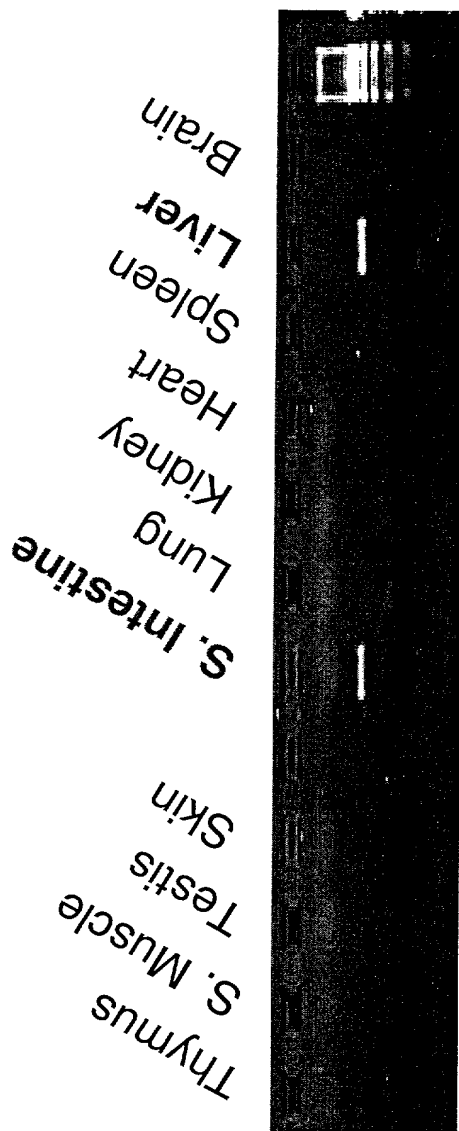


FIGURE 11

Human $\alpha_2\text{M}$ is Predominantly Expressed in the Liver and Small Intestine



Mouse β is Selectively Expressed in the Liver and Small Intestine



Mouse Multiple Tissue RT-PCR

cDNA Cloning and Genomic Organization of *ABCG5*

- The predicted human and mouse proteins share 80% identity and is 28% identical to *Drosophila* Brown
- Human ABCG5 contains 13 exons and spans at least 25kb of genomic DNA

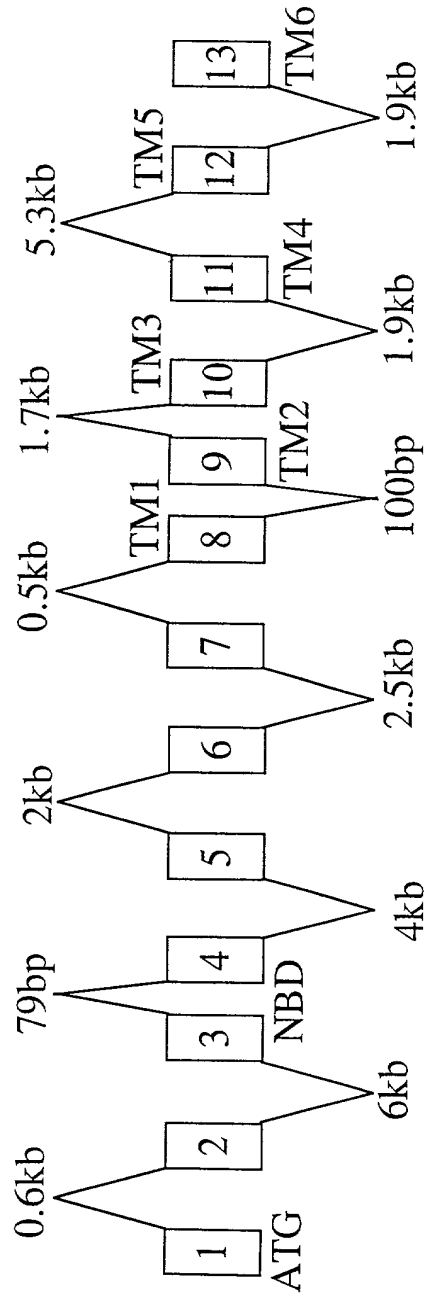


FIGURE 14A

Human SSG nucleotide sequence—13 Exons

[Exon 1
 GTCAGGTGGAGCAGGCAGGGCAGTCTGCCACGGGCTCCCCAACTGAAGCCACTCTGGGGA
 GGGTCCGGCCACCAGAAAATTTGCCAGCTTTGCTGCCTGTTGGCCATGGGTGACCTCTC
 ATCTTTGACCCCCGGAGGGTCCATGGGTCTCCAAGTAAACAGAGGCTCCCAGAGCTCCCT
 GGAGGGGGGCTCCTGCCACCGCCCCGGAGCCTCACAGCCTGGGCATCCTCCATGCCTCCTA
 CAGCGTCAGCCACCGCGTGAGGCCCTGGTGGGACATCACATCTTGCCGGCAGCAGTGGAC
 CAGGCAGATCCTCAAAGATGTCTCCTTGTACGTGGAGAGCGGGCAGATCATGTGCATCCT
 AGGAAGCTCAGGCTCCGGGAAAACCACGCTGCTGGACGCCATGTCCGGGAGGCTGGGGCG
 CGCGGGGACCTTCCTGGGGGAGGTGTATGTGAACGGCCGGGCGCTGCGCCGGGAGCAGTT
 CCAGGACTGCTTCTCCTACGTCCTGCAGAGCGACACCTGCTGAGCAGCCTCACCGTGC
 CGAGACGCTGCACTACACCGCGCTGCTGGCCATCCGCCGCGCAATCCCGGCTCCTTCCA
 GAAGAAGGTGGAGGCGTCATGGCAGAGCTGAGTCTGAGCCATGTGGCAGACCGACTGAT
 TGGCAACTACAGCTTGGGGGGGCATTTCCACGGGTGAGCGGCGCCGGGTCTCCATCGCAGC
 CCAGCTGCTCCAGGATCCTAAGGTCATGCTGTTTGATGAGCCAACCACAGGCCTGGACTG
 CATGACTGCTAATCAGATTGTCTCCTCCTGGTGGAACTGGCTCGCAGGAACCGAATTGT
 GGTTCTCACCATTACCAGCCCCGTTCTGAGCTTTTTTCAGCTCTTTGACAAAATTGCCAT
 CCTGAGCTTTCGGAGAGCTGATTTTCTGTGGCACGCCAGCGGAAATGCTTGATTTCTTCAA
 TGA CTGCGGTTACCCTTGTCTGAACATTCAAACCTTTTGACTTCTATATGGACCTGAC
 GTCAGTGGATAACCAAAGCAAGGAACGGGAAATAGAAACCTCCAAGAGAGTCCAGATGAT
 AGAATCTGCCTACAAGAAATCAGCAATTTGTCATAAAACTTTGAAGAATATTGAAAGAAT
 GAAACACCTGAAAACGTTACCAATGGTTTCCTTTCAAACCAAAGATTCTCCTGGAGTTTT
 CTCTAAACTGGGTGTTCTCCTGAGGAGTGACAAGAACTTGGTGAGAAATAAGCTGGC
 AGTGATTACGCGTCTCCTTCAGAATCTGATCATGGGTTTGTTTCTCCTTTTCTTCGTTCT
 GCGGGTCCGAAGCAATGTGCTAAAGGGTGCTATCCAGGACCGCGTAGGTCTCCTTTACCA
 GTTTGTGGGCGCCACCCCGTACACAGGCATGCTGAACGCTGTGAATCTGTTTCCCGTGCT
 GCGAGCTGTCAGCGACCAGGAGAGTCAGGACGGCCTCTACCAGAAGTGGCAGATGATGCT
 GGCCTATGCACTGCACGTCCTCCCCTTCAGCGTTGTTGCCACCATGATTTTCAGCAGTGT
 GTGCTACTGACGCTGGGCTTACATCCTGAGGTTGCCCCGATTGATATTTTCTGCTGC
 TCTCTTGGCCCCCACTTAATTGGTGAATTTCTAACTCTTGCTACTTGGTATCGTCCA
 AAATCCAAATATAGTCAACAGTGTAGTGGCTCTGCTGTCCATTGCGGGGGTGCTTGTGG
 ATCTGGATTCTCAGAAACATAACAAGAAATGCCATTCTTTTAAATCATCAGTTATTT
 TACATTCCAAAAATATTGCAGTGAGATTCTTGTAGTCAATGAGTTCTACGGACTGAATTT
 CACTTGTGACAGCTCAAATGTTTCTGTGACAATAATCCAATGTGTGCCTTCACTCAAGG
 AATTCAATTATTGAGAAAACCTGCCCAGGTGCAACATCTAGATTCACAATGAACTTTCT

FIGURE 14B (1 of 2)

GATTTTGTATTTCATTTATTCCAGCTCTTGTCATCCTAGGAATAGTTGTTTTCAAATAAG
GGATCATCTCATTAGCAGGTAGTGAAAGCCATGGCTGGGAAAATGGAAGTGAAGCTGCCG
ACTGTGCATGACTGCTCTGAACGTCTGAAATGAGAGTGCCATGTATTTCTTTCTTGACAG
GACATCTCAAGTCTTTTAACCATTAAGACTCCATTTGTGCCTCTTGATCCAAGCAGGCC
TTGAATGCAATGGAAGTGGTTTATAGTCCCTTGCTCTTACAACCTGCAGGGACATGTGGT
TATTTGGAAATTGTGACTGAGCGGACCCAAGAATGTAAATAATATTCATAAACCTATGGG}

Exon number	exon size	5' splicing site	3' splicing site	Intron size
1			GCGTCAGgtaaggcag	~600bp
2	124	ccttaaagCCACCGC	AGCTCAGgtaagcttg	~6kb
3	137	gccccgcagGCTCCGG	CCTGCAGggtggcgcg	79bp
4	103	ctcctgcagAGCGACA	AAGGTGGgtgcagccc	~4kb
5	129	tcaggtggAGGCCGT	GATCCTAgtaagtggc	~2kb
6	140	tgctggcagAGGTCAT	TTTTCAGgtaagaggt	~2.5kb
7	130	tctggtcagCTCTTTG	TTCTATAgtaagttt	~0.5kb
8	214	aacttttagTGGACCT	TCCTGAGgtaagaggc	100bp
9	206	tgtttcagGAGAGTG	AATCTGTgtaagtgcc	~1.7kb
10	139	catccccagTTCCCGT	GCTACTGgtgaggggtt	~1.9kb
11	186	ctttctagGACGCTG	TCCTCAGgtaagatat	~5.3kb
12	113	tttcttaagAAACATA	ACTTGTGgtaagtatt	~1.2kb
13		ccttgacagGCAGCTC		
Total				~25.9kb

Exonic sequences in capital letter

FIGURE 14B (2 of 2)